S2700 Series Enterprise Switches

HUAWEI TECHNOLOGIES CO., LTD.

HUAWEI

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Product Overview

The S2700 series enterprise switches (S2700s) are next-generation energy-saving intelligent 100M Ethernet switches. The S2700 utilizes cutting-edge switching technologies and Huawei Versatile Routing Platform (VRP) software to meet the demand for multi-service provisioning and access on Ethernet networks. It is easy to install and maintain and can be used in a variety of enterprise network scenarios. With its flexible VLAN deployment, comprehensive security and QoS policies, and energy-saving technologies, the S2700 helps enterprise customers build next-generation IT networks.

The S2700 is a box device that is 1 U high. It is available in a standard version (SI) or an enhanced version (EI).

Product Appearance

S2700-9TP-EI/SI

- Eight 10/100Base-TX ports and one gigabit combo port (10/100/1000Base-T or 100/1000Base-X)
- AC and DC power supply for the EI version; AC power supply for the SI version
- Forwarding performance: 2.7 Mpps

S2700-9TP-PWR-EI

- Eight 10/100Base-TX ports and one gigabit combo port (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- PoE+
- Forwarding performance: 2.7 Mpps

S2700-18TP-EI/SI

- Sixteen 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- Forwarding performance: 5.4 Mpps

S2700-26TP-EI/SI

- Twenty-four 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC and DC power supply for the EI version; AC power supply for the SI version
- Forwarding performance: 6.6 Mpps

S2700-26TP-PWR-EI

- Twenty-four 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- PoE+
- Forwarding performance: 6.6 Mpps

S2710-52P-SI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- Forwarding performance: 13.2 Mpps

S2700-52P-EI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC and DC power supply
- Forwarding performance: 13.2 Mpps

S2710-52P-PWR-SI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- PoE+
- Forwarding performance: 13.2 Mpps

S2700-52P-PWR-EI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- PoE+
- Forwarding performance: 13.2 Mpps

Product Features

Maintenance-free, easy deployment and effortless management

- The S2700 supports automatic configuration and plug-and-play, which dramatically reduces maintenance costs. The S2700 offers a new application-specific integrated circuit (ASIC) switching technique and a fan-free design. This design reduces mechanical faults and protects the device against damages caused by condensed water and dust, reducing the maintenance workload by 53%.
- The S2700 supports batch remote upgrades, which makes the device easy to use and deploy. It provides a Web NMS system with a user-friendly GUI to implement automatic topology discovery, alarm management, and visual configuration, facilitating operation and maintenance. The Network Quality Analyzing (NQA) function assists users with network planning and upgrades. In addition, the S2700 supports HGMP v2, SSH v2, HWTACACS, RMON, and port-based traffic statistics.
- The S2700 supports GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to ensure correct VLAN configuration and reduce network administrator workloads.

Flexible service control

- The S2700-EI supports various ACLs. ACL rules can be applied to VLANs to flexibly control ports and schedule VLAN resources.
- The S2700 supports port-based VLAN assignment and MAC address-based VLAN assignment. Port-based VLAN assignment is used in networks where users move frequently, and MAC address-based VLAN assignment applies to networks that require high levels of security.

Excellent security features

- The S2700 supports DHCP snooping, which generates user binding entries based on users' access interfaces, MAC addresses, IP addresses, IP address leases, VLAN IDs. The DHCP snooping function protects enterprises from common attacks such as bogus IP packet attacks, man-in-the-middle attacks, and bogus DHCP server attacks.
- The S2700 can limit the number of MAC addresses that can be learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding, which occurs when users' MAC addresses cannot be found in the MAC address table. The S2700 can also limit the number of ARP entries to prevent ARP spoofing attacks. In addition, it provides an IP source check function to prevent malicious users from using spoofed IP addresses to initiate DoS attacks.
- The S2700 supports centralized MAC address authentication and 802.1x authentication. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.

PoE function

- The S2700 PWR can use Power over Ethernet (PoE) power supplies with different power levels to provide -48 V DC power for powered devices (PDs) such as IP Phones, WLAN APs, and Bluetooth APs. In its role as power sourcing equipment (PSE), the S2700 PWR complies with IEEE 802.3af and 802.3at (PoE+), and can work with PDs that are incompatible with 802.3af or 802.3at (POE+). Each port provides a maximum of 30 W of power, complying with IEEE 802.3at. The PoE+ function increases the maximum power available on each port and implements intelligent power management for high-power consumption applications. This process facilitates the ease of PD use. PoE ports are still able to work while in power-saving mode.

High scalability

- The S2700 series switches (S2700-52P-EI, S2710-52P-SI-AC, S2700-52P-PWR-EI , and S2710-52P-PWR-SI) support intelligent stacking (iStack). Multiple S2700 switches can be connected with stack cables and set up as a stack to expand the system switching capacity. Meanwhile , stacking switches work as a virtual system and are managed using a single IP address, which greatly reduces cost of system operation and maintenance.
- Other S2700 models support the Huawei Group Management Protocol (HGMP). A maximum of 16 switches can set up a stack using the HGMP protocol and be managed using one IP address. This function implements automatic and centralized management of a large number of sparsely distributed switches.

Comprehensive QoS policies

- The S2700 supports complex traffic classification based on packets' port numbers, VLAN IDs, source MAC/IP addresses, destination MAC/IP addresses, IP protocols, or priorities. By limiting the traffic rate based on traffic classification results, the S2700 implements line-speed forwarding on each port to ensure high-quality voice, video, and data services. Each port supports four queues and multiple queue scheduling algorithms, such as WRR, SP, and WRR+SP.

Powerful surge protection capability

- The S2700 uses a Huawei-patented surge protection technique to prevent lightning-induced overvoltage. All ports on the S2700 have 6 kV of surge protection, making them eight times more lightning-proof than 4 kV switches. The Huawei patented surge protection technique greatly reduces the possibility of equipment being damaged by lightning, even in extreme situations or in scenarios where grounding is not feasible.

Quiet operation, energy conservation, and low radiation

- The S2700 uses an energy-saving integrated circuit design to ensure even heat dissipation. Idle ports can enter a sleep mode to further reduce power consumption. The S2700 generates no sound because it does not contain any fans. Radiation produced by the S2700 is within the standard range for electric appliances and causes no harm to the human body.

Product Specifications

Item	S2700-EI	S2700-SI
100M port	S2700-9TP-SI/S2700-9TP-EI/S2700-9TP-PWR-EI: 8*10/100Base-TX S2700-18TP-SI/S2700-18TP-EI: 16*10/100Base-TX S2700-26TP-SI/S2700-26TP-EI/S2710-26TP-PWR-SI/S2700-26TP-PWR-EI: 24*10/100Base-TX S2710-52P-SI/S2700-52P-EI/S2710-52P-PWR-SI/S2700-52P-PWR-EI: 48*10/100Base-TX	
1000M port	S2700-9TP-SI/S2700-9TP-EI/S2700-9TP-PWR-EI: 1*GE Combo S2710-52P-SI/S2700-52P-EI/S2710-52P-PWR-SI/S2700-52P-PWR-EI: 2*100/1000Base-X,2*1000Base-X Others：2*GE Combo	
MAC address table	8 K MAC address entries Manual creation and deletion of MAC address entries Aging time of MAC address entries Disabling MAC address learning on an interface or aggregation group Limit on the number of MAC addresses learned on an interface Blackhole MAC address entries	
VLAN	4 K VLANs, complying with IEEE 802.1Q Port-based VLAN assignment	
	MAC address-based VLAN assignment QinQ	N/A

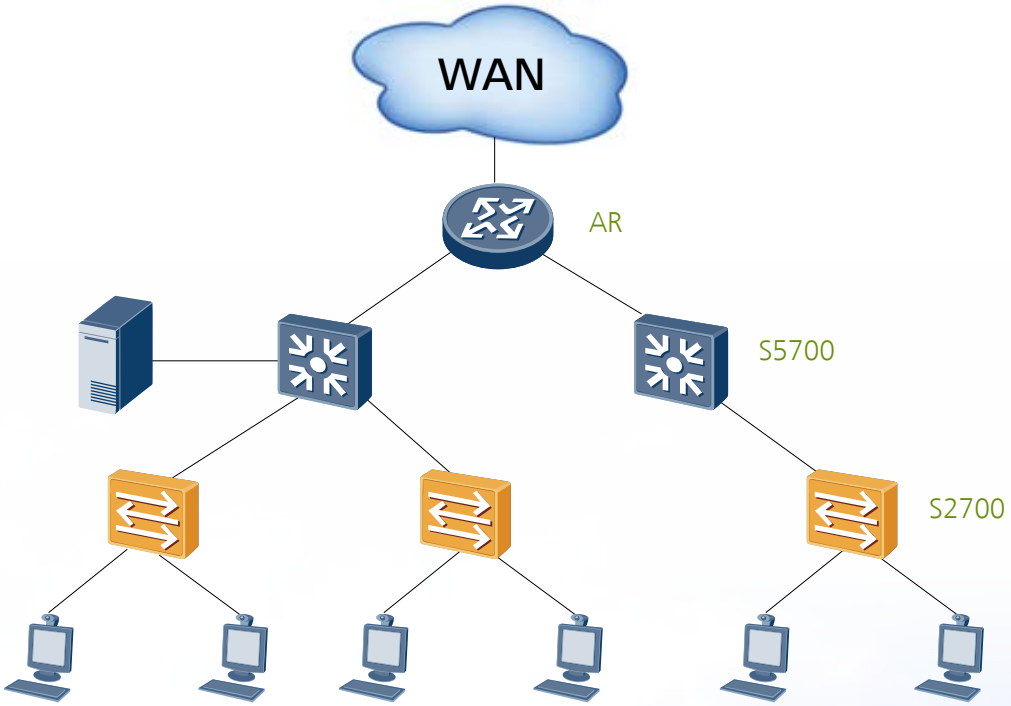
Item	S2700-EI	S2700-SI
QoS	Port-based rate limiting and flow-based rate limiting Four queues of different priorities on each port Mapping between 802.1p priorities and queues SP, WRR, and SP+WRR algorithms	
	Traffic classification based on the source MAC address, destination MAC address, source IP address, destination IP address, Layer 4 port number, protocol type, VLAN ID, Ethernet protocol, and CoS Flow-based priority marking and packet redirection	N/A
IPv6 features	IPv6 host Static IPv6 routes IPv6 ACLs MLD v1/v2 snooping	IPv6 host Static IPv6 routes
Multicast	IGMP v1/v2/v3 snooping Multicast load balancing among member ports of a trunk Port-based rate limiting and traffic statistics for multicast packets	
Port mirroring	1:1 and N:1 port mirroring	
	Traffic mirroring	N/A
Security	802.1x authentication and limit on the number of users on an interface Dynamic ARP detection IP source guard	N/A
	AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC Binding of the IP address, MAC address, interface, and VLAN Port-based rate limiting Port isolation, port security, and sticky MAC Packet filtering Packet filtering based on MAC addresses Suppression of multicast, broadcast, and unknown unicast packets Limit on the number of learned MAC addresses CPU defense	Port isolation Suppression of multicast, broadcast, and unknown unicast packets CPU defense
Surge protection	All service ports have a surge protection capability of 6 KV, which can be increased to 15 KV when using additional surge protection devices.	

Item	S2700-EI	S2700-SI
Device management	Stacking Auto-Config CLI-based configuration Remote configuration using Telnet SNMP V1/V2/V3 RMON HGMP v2 SSHv2 Web-based device management GVRP	
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)	
Power supply	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz	
	DC: Rated voltage range: –48 V to –60 V DC Maximum voltage range: –36 V to –72 V DC Note: PoE-support switches do not use DC power supplies.	N/A
Dimensions (W x D x H)	S2700-9TP-EI/SI: 250 mm x 180 mm x 43.6 mm S2700-9TP-PWR-EI: 320 mm x 220 mm x 43.6 mm S2700-18TP-EI/SI, S2700-26TP-EI/SI: 442 mm x 220 mm x 43.6 mm S2710-26TP-PWR-SI/S2700-26TP-PWR-EI: 442 mm x 420 mm x 43.6 mm S2710-52P-SI/S2700-52P-EI: 442 mm x 220 mm x 43.6 mm S2710-52P-PWR-SI/S2700-52P-PWR-EI: 442 mm x 420 mm x 43.6 mm	
Weight	S2700-9TP-EI<1.4kg S2700-9TP-PWR-EI<2.5kg S2700-18TP-EI<2.4Kg S2700-26TP-EI<2.4kg S2700-52P-EI<3kg S2700-26TP-PWR-EI<4kg (without power supply) S2700-52P-PWR-EI<4.3Kg (without power supply)	S2700-9TP-SI<1.4Kg S2700-18TP-SI<2.4kg S2700-26TP-SI<2.4kg S2710-52P-SI<3kg S2710-26TP-PWR-SI<4kg (without power supply) S2710-52P-PWR-SI<4.3Kg (without power supply)
Power consumption	S2700-9TP-EI<12.8W S2700-18TP-EI<14.5W S2700-26TP-EI<15.5W S2700-52P-EI<38W S2700-9TP-PWR-EI<154W (PoE: 124W) S2700-26TP-PWR-EI<808W (PoE: 740W) S2700-52P-PWR-EI<880W (PoE: 740W)	S2700-9TP-SI<12.8W S2700-18TP-SI<14.5W S2700-26TP-SI<15.5W S2710-52P-SI<38W S2710-26TP-PWR-SI<808W(PoE: 740W) S2710-52P-PWR-SI<880W(PoE: 740W)

Applications

100 Mbit/s Access Rate for Terminals

The S2700 can function as a desktop access device that provides an access rate of 100 Mbit/s for terminals and 1000 Mbit/s uplink interfaces to communicate with uplink devices.



Product List

Product Description
S2700-9TP-EI (input voltage: 220 V AC or –48 V DC)
S2700-9TP-SI (input voltage: 220 V AC)
S2700-18TP-EI (input voltage: 220 V AC)
S2700-18TP-SI (input voltage: 220 V AC)
S2700-26TP-EI (input voltage: 220 V AC or –48 V DC)
S2700-26TP-SI (input voltage: 220 V AC)
S2700-52P-EI (input voltage: 220 V AC or –48 V DC)
S2710-52P-SI (input voltage: 220 V AC)
S2700-9TP-PWR-EI (input voltage: 220 V AC, providing the PoE function)
S2700-26TP-PWR-EI (two hot swappable AC power supplies, with an input voltage of 220 V, providing the PoE function)
S2710-26TP-PWR-SI (two hot swappable AC power supplies, with an input voltage of 220 V, providing the PoE function)
S2700-52P-PWR-EI (two hot swappable AC power supplies, with an input voltage of 220 V, providing the PoE function)
S2710-52P-PWR-SI (two hot swappable AC power supplies, with an input voltage of 220 V, providing the PoE function)
250 W PoE power supply unit
500 W PoE power supply unit

For more information, visit http://enterprise.huawei.com or contact your local Huawei sales office.

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